



United States Department of Agriculture
Forest Service

Kennecott Phase 3 Exploration Plan of Operations Environmental Assessment



Forest Service Beaverhead-Deerlodge National Forest Pintler Ranger District August 2018

For More Information Contact:

Steve Kelley, Minerals Administrator
Butte Ranger District
1820 Meadowlark Lane
Butte, MT 59701
(406) 494-0222
steve.l.kelley@usda.gov
Fax: (406) 494-0268

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Introduction

Kennecott Exploration Company has been exploring for minerals in the Smart Creek and Ham Gulch areas for the last two years. Kennecott was approved and excavated 5 test trenches in 2017 to test for valuable minerals. Their exploration efforts resulted in information that warranted further exploration. In 2018 they were approved to drill 11 diamond drill core holes. On July 7, 2018 Kennecott submitted an amendment to their 2018 Plan of Operations (POO) to add four additional diamond drill core hole sites requiring two temporary bridges to cross Smart Creek. Due to cultural features Kennecott was required to propose an additional temporary bridge location to avoid the cultural feature. In February 2019 their amendment to the 2018 POO was approved totaling 15 diamond drill core hole sites, three temporary bridge crossings and 1,435 feet of new temporary road construction. Of the 15 approved diamond drill core holes, they drilled five with an average depth of 3,000 feet. The information obtained from the five drill holes resulted in Kennecott submitting the Phase 3 Exploration POO in April of 2019 proposing to drill 31 Reverse Circulation (RC) holes to a depth of approximately 500 feet and five additional diamond drill core holes to an estimated depth of 3,000 feet. Kennecott is proposing to drill the RC holes first to determine if they want to proceed with drilling any of the proposed or approved diamond drill core holes. The information gathered from this project will be used to determine if they will continue with additional exploration in the future. Kennecott is requesting five years to complete the Phase 3 Exploration project.

Need for the Proposal

The Kennecott Exploration Company submitted a Plan of Operations (POO) to the Forest Service proposing to explore for minerals on unpatented mining claims. The Phase 3 Exploration project proposes drilling a total of 36 exploration holes over a five-year period. This Environmental Assessment (EA) discloses the potential impacts of approving the proposal.

The role of the Forest Service is to ensure that mining activities minimize adverse environmental effects on National Forest System resources and comply with all applicable environmental laws. Congress has not given the Forest Service authority to unreasonably circumscribe or prohibit reasonably necessary activities under the 1872 General Mining Law that are otherwise lawful.

Proposed Project Location

The proposed project is located in T.8N., R.13W., sections 5, 6 and 7, approximately 1.5 miles northwest of Maxville, Montana (see map). The project lies in the Flint Foothills Management Area in the Clark Fork Flint Landscape. The Flint Foothills Management Area section describes the area as having historic mining sites scattered throughout on patented inholdings and that mining activity continues in some locations. It also states that visitors may encounter historic mining remnants and current mining activity or reclamation.

Proposed Action

Kennecott proposes drilling 31 RC holes to a depth of approximately 500 feet and 5 diamond drilling exploration core holes to a depth of approximately 3,000 feet. It is unlikely that all 36 proposed drill hole sites would be constructed or drilled. Having 36 drill sites approved would allow them the freedom to move any direction depending on the results of the initial drill holes. If all 36 drill sites were constructed and drilled there would be approximately 6 acres of surface disturbance.

Drilling would occur 24 hours a day, 7 days a week. Crews will consist of one driller and two helpers per shift. Shift change will occur at 6am and 6pm daily. Up to eight personnel consisting of geologists, health and safety personnel, project managers and other workers may be on site at any time. Visitors could expect increased traffic mostly during early morning and late evening hours during shift change. For the public's safety, traffic control signs would be placed on roads being used to inform visitors of the increased traffic.

RC drilling is a technique that uses a supply of air down through the center of the drill pipe and drill bit forcing chips and dirt out of the hole. It is planned to drill these RC holes "dry" only using water if needed for dust suppression and cooling of the drill bit. A backhoe would be present to dig sumps measuring ten feet long, five feet wide and four feet deep to catch drill cuttings. It is anticipated it would take one to three

days to complete each RC hole. Completed RC drill sites would be reclaimed before moving on to the next drill site. RC holes are located where temporary road construction is not necessary. Six RC holes will be located a short distance off National Forest System (NFS) roads 1501 and 78404 so as not to impede traffic. The other 25 RC holes will be located on road prisms left from past logging or mining operations. Two RC hole locations will be reached by cross country travel.

The five proposed diamond drilling exploration core holes would require temporary road construction using an excavator to reach the drill sites. Approximately 4,570 feet of temporary road would be constructed if all five drill sites are drilled. One of the five drill sites would require crossing Smart Creek on a temporary bridge.

Drill pads needed for diamond drilling would measure approximately 150 feet wide and 150 feet long. Sumps would measure 10 feet wide and 12 feet long. Two to three sumps would be needed at each drill site. Disturbance for each drill site including the temporary road construction would average a little over a half acre. Approximately 3 acres would be disturbed if all five drill sites were drilled.

Drill pads and sumps to catch the drill cuttings would be constructed using an excavator. Topsoil, where present, would be removed before excavation and saved for reclamation.

Water used for drilling would be hauled to the site on an average of two times per day. Pickup trucks would be used to haul personnel, equipment and fuel daily.

All disturbances would be reclaimed and seeded if needed. Drill holes would be plugged to State of Montana specifications. Each drill site could take up to two months to complete.

Access would be by NFS roads #1501, #5185, 78404, and Forest Service roads UR8-408 and UR8-409.

Environmental Impacts of the Proposed Action

This project is guided by management direction found in the Forest Plan (USDA Forest Service 2009a). The proposed action would contribute to Forest Plan goals to ensure that locatable minerals are developed on all parts of the Forest not withdrawn from locatable mineral entry in accordance with the 1872 Mining Law, regulations, and national direction. (USDA Forest Service 2009a, p. 27).

Specialists analyzed the environmental effects of allowing Kennecott exploration Company to drill 11 exploration holes in 2018 and excavate 5 test trenches in 2017. Terms and Conditions (Appendix A) were created based on mitigations developed during the analysis process and Kennecott was required to operate under those Terms and Conditions. A review of the proposed actions for new or changing conditions by the specialists was performed and it was determined that no additional analysis or mitigations would be required.

The environmental effects of the Proposed Action are described below. The discussion focuses on resources most likely to be affected by the access to and exploration of the claim area.

Resources for which the effects of the proposed action were determined to not have an effect and do not require additional mitigations, other than those developed in 2017 and 2018, or permit conditions include: archaeology, sensitive plants, wildlife, soils, vegetation and range. It is anticipated this proposed project will have No Impact for all Sensitive plant species.

Archaeology

Proposed Action

An intensive cultural resource field inventory was conducted of the Phase 3 Exploration project on August 19 and 26, 2019. All proposed drill sites and temporary roads were surveyed. No cultural resources were identified within the project area of potential effect and therefore, the proposed drilling project will have No Effect on cultural resources.

Wildlife

Proposed Action

The proposed action was reviewed by a District Wildlife Biologist who determined there was no significant direct, indirect or cumulative effects from this project to Threatened or Endangered Species. There would be no effects to grizzly bear or Canada lynx habitat from the proposed action. Although unlikely as there have been no sightings of either species in the project area, there could be disturbance to these species if they travel through the project area during project implementation. Overall, this project is not likely to adversely affect the threatened grizzly bear or Canada lynx. There would also be no jeopardy to the “proposed” wolverine from the proposed project activities.

There will be no significant direct, indirect or cumulative effects from this project to Region 1 Forest Service sensitive species. Due to disturbance however, if wolves were in the area during implementation, the project may impact individuals or habitat but would not contribute to a trend towards federal listing or loss of viability to the population or species. There would be no impact to any other sensitive terrestrial species.

Aquatics and hydrologic resources

Proposed Action

The project was reviewed by a District Fisheries Biologist who determined the Proposed Action may impact individuals or habitat of the boreal toad but will not likely contribute to a trend toward federal listing or cause a loss of viability to the population or the species. If Boreal Toads were found during exploration operations, they were to be moved away from the activity.

No negative impacts to floodplains, wetlands, or municipal watersheds were expected from the project.

Bull trout and their Critical Habitat, arctic grayling, western pearlshell mussels, and northern leopard frogs are not found within the analysis area. There will be no effects to these species.

This project will have No Impact for all other sensitive aquatic species.

Laws, Regulations, Policy, and Forest Plan Direction

The authority for the Forest Service to insure that National Forest System lands, including those under mining claim locations, are used only for purposes required for and reasonably incidental to mining and in a manner that minimizes adverse environmental impacts, falls under the agency's broad authorities from the following statutes and case law, specifically:

- (1) *The General Mining Act of 1872*
- (2) *The Organic Act of 1897 (16 USC 478, 551)*
- (3) *Multiple Use Mining Act of July 23, 1955 (30 USC 612)*
- (4) *U.S. v. Richardson, 599 F. 2d 290 (1979); Cert. denied, 444 U.S. 1014 (1980)*
- (5) *Title 36 Code of Federal Regulations, Part 228, Subpart A - Locatable Minerals*

The General Mining Act of 1872 is a United States federal law that authorizes and governs prospecting and mining for economic minerals, such as gold and silver, on federal public lands. This law, approved on May 10th, 1872, codified the informal system of acquiring and protecting mining claims on public land, formed by prospectors in California and Nevada from the late 1840s through the 1860s.

Provisions of the 1872 Mining Law were changed with the implementation of the Federal Land Policy Management Act (FLPMA) of 1976 effective as of January, 1981. Many of the provisions of FLPMA revised the surface uses allowed on mining claims to halt by regulation or otherwise, unnecessary or undue degradation of the public lands allowed under the 1872 mining law. A portion of FLPMA is the 43 CFR 3809 Surface Management regulations that were updated and published in December of 2001. These rules effectively replace many of the 1872 Mining Law provisions and require that mining reclamation, financial guarantees for reclamation to the Federal government, mining claim occupation permits, and detailed Mining Plans of Operations are to be submitted to the governing agencies prior to disturbing the surface.

The 1955 Multiple Use Mining Act (30 USC 612) restricts mining operators to using reasonable methods of surface disturbance that are appropriate to their stage of operation (U.S. v. Richardson (supra)). This legal principle is reinforced by the Forest Service 36 CFR 228 Subpart A regulations, which provide procedures for authorizing operations on the National Forests that are reasonably incidental to mining, but requires that such operations be conducted so as to minimize adverse environmental impacts. For a use to be reasonably incident, the type and level of use must be justified as being appropriate to the stage of mining activity in which the operation is legitimately engaged (i.e., prospecting, exploration, development, production, abandonment, or reclamation). In turn, the stage of mining activity with the related use must be required, justified, and appropriate, based on the nature and extent of the mineral resource present.

Appendix A

Project Mitigation Measures:

- The placement of the temporary bridge should protect all aquatic species. The structure should be from bank to bank with no part of the bridge or machinery accessing or touching any water. A Forest Service representative will be on site for the laying of the bridge and the construction of the temporary roads in the RCA to minimize and follow FP standards and objectives.
- If adult toads are found during drilling, they should be moved away from the activities.
- If cultural resource sites or artifacts are discovered during project implementation, the Forest Archeologist and appropriate tribes will be notified immediately.
- Food and attractant storage, possession and handling will comply with Food Storage Order 2014-BD/BITT-009 during all operations.
- Travel associated with the project will be restricted to the minimum cross country travel necessary.
- All cross-country travel routes will be reclaimed to pre-existing condition and will be blocked by boulders or vegetative debris.
- Temporary roads will be utilized only for project implementation and will be obliterated at project completion.
- No storing of equipment or materials and supplies in natural openings such as meadows or upland grass parks or in riparian areas to avoid impacts to vegetation. If an acceptable location cannot be found, work with the onsite Forest Service Representative to approve a site.
- Operator is responsible for immediate repairs of any and all damages to roads, structures, and improvements, which result from their operations, at their own expense to Forest Service standards of repair.
- The site will be reclaimed to the natural grade to the extent feasible.
- Noxious weeds will be controlled following procedures in the Noxious Weed Control Program ROD (2002) for the Beaverhead-Deerlodge National Forest.
- At drill holes 3, 8 and 11 all equipment and supplies necessary to plug an artesian well will be on site prior to the start of drilling operations.

Camping: On-site occupancy may exceed the 16-day camping limit. A self-contained unit will be used for human waste.

Air Quality: The Operator shall comply with applicable Federal and State laws and regulations.

Water Quality: The Operator shall comply with applicable Federal and State laws and regulations.

Solid Waste: (1) Operator shall comply with applicable Federal and State Standards for the disposal and treatment of solid wastes. (2) All trash, such as cans, bottles, oil filters, old posts and other debris shall not be left to accumulate on the site and shall be removed from National Forest lands for disposal in a State-approved landfill. (3) All natural tailings, dumpage, deleterious materials, or substances and other waste produced by operations shall be stockpiled where feasible for future rehabilitation work. Where it is not feasible to stockpile it shall be deployed, arranged, disposed of or treated as agreed upon by the Forest Service Representative.

Safety: Hazardous sites or conditions resulting from operations shall be marked by signs, fenced or otherwise identified to protect the public in accordance with Federal and State laws and regulations.

Prevention and Control of Fires: Operator shall comply with applicable Federal and State fire laws and regulations and shall take all reasonable measures to prevent and suppress fires on the area of operations and shall require his employees, contractors, and subcontractors to do likewise.

Fire suppression equipment must be available to all personnel on the project site and vehicles traveling to and from the site. Equipment must include a minimum of one hand tool per individual (shovel or pulaski), and one properly rated fire extinguisher per vehicle and/or internal combustion engine.

All gasoline and diesel equipment must be equipped with effective spark arresters and mufflers. Spark

arresters must meet Forest Service specifications discussed in the USDA Forest Service Spark Arrester Guide. In addition, all electrical equipment must be properly insulated to prevent sparks.

The operator will be held responsible for damage and suppression costs for fires started as a result of their operations. Fires must be reported to the Forest Service as soon as possible.

Reclamation: Commensurate with mining activity or at the earliest possible time during operations, Operator shall reclaim the surface disturbed in operations by contouring the disturbances to as near preexisting conditions as possible. The operator will also take measures that will prevent or control on-site and off-site damage to the environment and forest surface resources, including:

- Control of erosion and landslides;
- Control of water runoff;
- Isolation, removal or control of toxic materials;
- Reshaping and revegetation of disturbed areas;
- Backfilling of excavated trenches, ditches and holes with excavated material and covering them with topsoil.
- Removal of all Items necessary or incidental to the operation (equipment, pumps, etc.) from National Forest System lands at the close of the operating season.

Revegetation: Revegetation shall consist of successful reintroduction of native grasses. Should analysis by the agencies (FS &/or State) show the need, an approved fertilizer will be added at the start of the growing season.

Native Seed Mix: If needed, a specified list of native grass seed mixture, prepared by the Forest Service, will be provided to you. You will be responsible for purchasing the seed mixture. A total of 15 pounds of native seed should be applied per acre, if the site is broadcast seeded.

Seed must be certified noxious weed seed free from the current "Western States Noxious Weeds List." Each lot must be tested by a certified seed laboratory and should be conducted prior to seed mixing.

Documentation of test results from a certified seed analyst and seed analysis labels attached to the bags should be provided. Seed will not be accepted without documentation in writing of no weeds on the current "Western States Noxious Weeds List" upon delivery.

Noxious Weeds: In order to prevent the potential spread of noxious weeds into the project area, the Operator shall be required to furnish the Forest Service with proof of weed-free equipment. Operator must clean all off-road equipment prior to entry on the project area. This cleaning shall remove all dirt and plant parts and material that may carry noxious weed seeds into the project area.

The Operator agrees to monitor for the introduction of new noxious weeds for three years following exploration. Should infestations become established, the Operator will be responsible for the control of the noxious weeds. The Operator will provide a control plan to the Forest Service for approval that complies with the laws and regulations of the State of Montana and the Noxious Weed Control Program ROD (2002) for the Beaverhead-Deerlodge National Forest.

Topsoil: Where there is topsoil, the operator shall strip the topsoil (A horizon) from all areas to be disturbed. This topsoil shall be placed in a manner in which it will be protected and readily available for use in reclamation.

Operating Procedures: The Operator shall notify the Forest Service Representative prior to Starting operations and likewise before leaving the area.

- All accidents or mishaps resulting in significant resource damage and/or death or serious personal injury must be reported to the Forest Service as soon as possible.
- All surface disturbing activities must be supervised by a responsible representative of the operator who is aware of the terms and conditions of the Plan of Operations.
- The Forest Service must be notified of any proposed changes to the approved Plan of Operations.

Any changes to the existing approved Plan are subject to Forest Service review and approval.

- State and county laws and regulations will be adhered to and required permits will be obtained prior to commencement of operations.

Wildlife and Range: Sightings of any threatened, endangered or sensitive species must be reported to the Forest Service and/or Montana Department of Fish, Wildlife and Parks.

Harassment of wildlife and livestock is prohibited.

Resource Protection: Section corners or other survey markers, including claim corners, in the project area must be located and flagged for preservation prior to commencement of surface disturbing activities. The removal, displacement or disturbance of markers must be approved in advance by a Forest Service licensed land surveyor. Replacement of markers disturbed by the operator's activities will also be by a licensed land surveyor approved by the Forest Service. Project related storage of fuels and toxicants within Riparian Conservation Areas is prohibited. Refueling within Riparian Conservation Areas is prohibited except for emergency situations, in which case refueling sites must have an approved spill containment plan and appropriate spill kits (Forest Plan page 21).

Representatives: A representative, named in writing, shall be readily available to the area of such operations and unless otherwise stipulated, he/she will be authorized to speak for the Operator in all aspects of this operation dealing with the Forest Service and receive notices in regard to performance under this operating plan and to take related action.

Bonds: Prior to the Forest Service approving this Plan of Operations, the Operator shall deliver and maintain a surety bond in an amount set by the Forest Service, which amount shall not be in excess of the estimated loss which the government would suffer upon default in performance of this work.